

In the claims:

1. (Currently Amended) A method for determining the concentration of a non-bound ~~metal ion~~iron in a sample of biological fluids, the method comprising:

a) ~~bringing the sample into contact~~contacting the sample of biological fluid with a surface coated with a polymer-conjugated ~~form of a metal ion~~chelator, under conditions ~~and for a period of time sufficient to allow~~suitable for allowing the non-bound ~~metal ion~~iron in the sample of biological fluid to be chelated by ~~the said polymer-conjugated metal ion~~chelator; thereafter

b) ~~bringing into contact with~~contacting said coated surface with a ~~complex comprising~~chelating marker chelating an additional marker bound to a metal ion, under conditions such that ~~said additional metal ion being chelated~~said polymer-conjugated metal chelator chelates said metal ion to thereby dissociate said marker from said metal ion; ~~atable by the metal chelator~~; thereafter

c) determining an amount of said marker dissociated from said metal ion ~~chelating marker not chelating said additional metal ion~~; and thereafter, thereby

d) ~~based on the amount of said chelating marker not chelating said additional metal ion~~, determining the concentration of the non-bound ~~metal ion~~iron in the sample of the biological fluid..

2. (Currently Amended) A method according to claim 1, wherein the non-bound ~~metal ion~~iron in the sample of biological fluid is non-transferrin bound iron (NTBI).

3. (Currently Amended) A method according to claim 1 or 2, wherein said polymer-conjugated ~~form of a~~metal chelator is a ~~desferrioxamine (DFO)~~polymer.

4. (Currently Amended) A method according to claim 1, wherein said surface is a multiwell plate surface.

5. (Currently Amended) A method according to claim 1, wherein said ~~chelating~~ marker is a fluorescent marker.

6-7. (Cancelled)

8. (Currently Amended) A method according to claim 5, wherein said ~~chelating marker~~ marker is a calcein.

9-10. (Cancelled)

11. (Withdrawn) A polymer for use in the determination of the concentration of a non-bound metal ion in a sample of serum or other biological fluids, characterized in that it is conjugated to a metal chelator.

12. (Withdrawn) A polymer according to claim 11, wherein the chelator is DFO or a DFO derivative.

13. (Withdrawn) A polymer according to claim 11, wherein the polymer is selected from among polystyrene, polyethylene, polycarbonate, polyester polymers and copolymers, polysaccharides, acrylate-based poly(hydroxamic acid), and polypeptides containing hydroxamate groups.

14. (Withdrawn) A polymer according to claim 12 or 13, which is a DFO or DFO derivative conjugated to a polymer selected from polyacrylate, polyacrylate derivatives, polyacrylate copolymers, arabinogalactan, dextran, pullulan, cellulose and their derivatives.

15. (Withdrawn) A kit for the determination of the concentration of a non-bound metal ion in a sample of serum or other biological fluids, comprising a surface coated with a polymer-conjugated form of a metal chelator.

16. (Withdrawn) A kit according to claim 15, wherein the surface is a multiwell plate.

17. (Withdrawn) A kit according to claim 15 or 16, wherein the surface is coated with a polymer conjugated with DFO or a DFO derivative.

18. (Withdrawn) A kit according to claim 17, wherein the surface is coated with polymeric arabinogalactan-DFO or with hydroxyethyl starch-DFO conjugate.

19. (Withdrawn) A kit according to claim 15, further comprising a marker conjugated with the same metal ion the concentration of which it is desired to determine.

20. (Currently Amended) A method according to claim 1, wherein said non-bound ~~metal ion~~iron in the sample of biological fluid and said ~~additional metal ion of said complex~~ are of identical type.

21. (Currently Amended) A method according to claim 1, wherein said non-bound ~~metal ion~~iron in the sample of biological fluid and said ~~additional metal ion of said complex~~ are of different type.

22. (New) A method for determining the concentration of a non-bound iron in a sample of biological fluid, the method comprising:

a) contacting the sample of biological fluid with a surface coated with DFO, under conditions suitable for allowing the non-bound iron in the sample of biological fluid to be chelated by said DFO;

b) contacting said surface with calcitonin bound to a metal ion, under conditions such that said DFO chelates said metal ion to thereby dissociate said calcitonin from said metal ion; and

c) determining an amount of said calcitonin dissociated from said

metal ion, thereby determining the concentration of the non-bound iron in the sample of the biological fluid..